

October 20, 2000

MEMORANDUM

TO: Mark Dietrich
Acting Regional Administrator
Pocatello Regional Office

FROM: Zach Klotovich, Air Quality Engineer *Zach*
Civil/Environmental Engineering
State Technical Services Office

THROUGH: Daniel Salgado
Lead Process Engineering
State Technical Services Office

SUBJECT: T2-000326, P4 Production, LLC, Soda Springs
Technical Analysis, Amended Operating Permit No. #042-00001
Removal of Pound-per-hour and Ton-per-year Fugitive Emission Limits

PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01 Sections 404.04 (*Rules for the Control of Air Pollution in Idaho*) (*Rules*) for Tier II Operating Permits.

PROJECT DESCRIPTION

P4 Production is proposing to amend OP# 042-00001 issued on April 3, 1990 for the Emissions Reduction - Scaleroom Scrubber Shutdown. The amendment consists of removing the pound-per-hour and ton-per-year limits on fugitive emissions.

Two sections of the permit, Quartzite drying and associated handling and Coke drying and associated handling, were removed because they contain control equipment that is no longer in existence. The sections were superseded by the New Coke Quartzite Dryer permit that contains the identical process names but includes the current control equipment. Rule citations for Control of Fugitive Dust (IDAPA 58.01.01.650), Visible Emissions (IDAPA 58.01.01.625), and Particulate Matter--Existing Equipment Process Weight Limitations (IDAPA 58.01.01.702) were updated.

FACILITY DESCRIPTION

Process descriptions were included in the permit but have been removed and are given here.

Undried Quartzite Handling to Screening and Storage

Quartzite is reclaimed from the raw quartzite stockpile by loader and dumped to coke and quartzite hopper 105. Quartzite falls from hopper 105 (coke and quartzite share this equipment up to here). Quartzite falls from belt 105 to belt 124 and transfers to belt 123, then to belt 201 and then feeds either the north quartzite screen or the south quartzite screen. Before reaching belt 124, quartzite can be dumped off belt 105 to the coke and quartzite dryer feed bin. Fine material falls from the north quartzite screen and/or south quartzite screen into the quartzite fines bin. All other screened quartzite falls from the north quartzite screen and/or south quartzite screen into the scaleroom quartzite bin.

Emissions from the loader traffic associated with getting quartzite from the raw quartzite stockpile to the coke and quartzite hopper 105 are uncontrolled. Emissions from the transfers associated with getting quartzite from the loader onto belt 105 are vented to baghouse 105, the gasses out of which are emitted through one stack. Emissions from the transfer points associated with getting quartzite from belt 105 to the coke and quartzite dryer feed bin or to belt 124 are vented to the coke-handling baghouse, the gases out of which are emitted through one stack.

Emissions from the transfer associated with getting quartzite from belt 124 to belt 123 are vented to the coke and quartzite dryer scrubber, the gases out of which are emitted through one stack. Emissions from the transfers associated with getting quartzite from belt 123 to the quartzite fines bin or scaleroom quartzite bin are vented to the nodule crushing and screening scrubber, the gases out of which are emitted through one stack. Dust collected in the baghouses is landfilled via the vacuum truck.

Phosphate ore nodules, coke, and quartzite proportioning and handling to the furnace stocking area

Material is fed from 11 scaleroom bins (1 containing quartzite, 6 containing phosphate ore nodules, and 4 containing coke) to 11 weigh bins which proportion material onto belt 416 in the scaleroom. Material is carried by this belt to the top of (north) furnace building 7 and falls by way of rotary distributor 421 to one of three belts (belt 417 for furnace 7, belt 418 for furnace 8, and belt 419 for furnace 9). Material falls from belt 417 to rotary stock diverter 672 which feeds belt 713, belt 714, or fills four stock bins. Belt 713 and belt 714 each fill one other stock bin. Material falls from belt 418 to furnace 8 stock diverter which feeds belt 12W or belt 12E. Belts 12W and 12E each fill six stock bins. Material falls from belt 419 to furnace 9 stock diverter which feeds belt 420W or 420E. Belts 420W and 420E each fill six stock bins.

Emissions from the transfer points associated with getting material from the eleven scaleroom weigh bins to belt 416 are vented to the scaleroom (quartzite handling) baghouse, the gases out of which are emitted through one stack. Emissions from the transfer points associated with getting material from belt 416 to either belt 713, 714, 12W, 12E, 420W, 420E, in addition to various points along belts 713, 714, 12W, 12E, 420W, 420E, are vented to the furnace stocking system baghouse, the gases out of which are emitted through one stack.

Emissions from the transfer points associated with getting material from belts 713 and 714 and from rotary stock diverter 672 to the furnace 7 stock bins are vented to the furnace 7 CO Baghouse, the gases out of which are emitted through one stack. Emissions from the transfer points associated with getting material from belts 12W and 12E to the furnace 8 stock bins are vented to the furnace 8 CO baghouse, the gases out of which are emitted through one stack. Emissions from the transfer points associated with getting material from belts 420W and 420E to the furnace 9 stock bins are vented to the furnace 9 CO baghouse, the gases out of which are vented through one stack.

Dust from the three CO baghouses is pneumatically conveyed to the furnace stocking system baghouse. Dust from the furnace stocking system baghouse fills a separate dust container near the baghouse. Dust from the dust container and the scaleroom baghouse is landfilled via the vacuum truck.

SUMMARY OF EVENTS

On August 21, 2000, the Idaho Department of Environmental Quality received an application from P4 Production for removing the pound-per-hour fugitive emission limits. On October 10, 2000, the application was determined complete.

DISCUSSION

1. Emission Estimates

The permit required fugitive emissions to be reasonably controlled and also to not exceed pound-per-hour and ton-per-year limits "as determined by the Department's emission estimation methods used in the Monsanto scaleroom scrubber bank application analysis". Since the emission estimates do not change and no monitoring was required to demonstrate compliance, it is reasonable to remove the pound-per-hour and ton-per-year limits from the permit. DEQ does not routinely include pound-per-hour or ton-per-year fugitive emission limits in permits because of the margin of error inherent in the emission estimates.

The permit now requires P4 to monitor the methods used to reasonably control fugitive emissions. This will assist DEQ in determining whether or not P4 is reasonably controlling fugitive emissions.

2. Modeling

No modeling was done in support of this amendment because emissions are not changing.

3. Area Classification

P4 Production is located in Soda Springs, Idaho, which is in Caribou County. Caribou County is designated as attainment or unclassifiable for all criteria pollutants. P4 Production is located in AQCR 61 and UTM Zone 12.

4. Facility Classification

The facility classification is A because actual emissions of CO, NO_x, SO₂, PM, and PM-10 are greater than 100 tons per year. The facility is an elemental phosphorus manufacturer, SIC 2819.

5. Regulatory Review

This OP is subject to the following permitting requirements:

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| a. | <u>IDAPA 58.01.01.401</u> | Tier II Operating Permit |
| b. | <u>IDAPA 58.01.01.403</u> | Permit Requirements for Tier II Sources |
| c. | <u>IDAPA 58.01.01.404.01(c)</u> | Opportunity for Public Comment |
| d. | <u>IDAPA 58.01.01.404.04</u> | Authority to Revise or Renew Operating Permits |
| e. | <u>IDAPA 58.01.01.406</u> | Obligation to Comply |
| f. | <u>IDAPA 58.01.01.625</u> | Visible Emission Limitation |
| g. | <u>IDAPA 58.01.01.650</u> | General Rules for the Control of Fugitive Dust |

FEES

The P4 Production facility is a major facility as defined in IDAPA 58.01.01.008.10 and is therefore subject to registration and registration fees in accordance with IDAPA 58.01.01.527. According to the Air Emissions Data Base Master List for 2000, the P4 Production, Soda Springs facility has registered 17,199 tons of pollutants by paying fees.

RECOMMENDATIONS

Based on the review of the application materials, and all applicable state and federal regulations, staff recommends that DEQ issue an amended Tier II OP to P4 Production, LLC. An opportunity for public comment on the amended OP is not required in accordance with IDAPA 58.01.01.404.01.c.

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cc: DEQ State Office
Pocatello Regional Office